ABSTRACT

In a first mode of burst communication in a telecommunication network comprising electronic edge nodes interconnected by bufferless core nodes, data bursts are formulated at the edge nodes, respective burst descriptors are communicated to a controller of a core node, and burst-transfer schedules are sent from the core node to respective edge nodes. In a second mode, each burst-stream is allocated a flow rate and a core node determines burst sizes and schedules burst-transfer permits.

In a bimodal burst-switching network, an edge node selects to send to a core node burst-transfer requests according to the first mode, or flow-rate-allocation requests according to the second mode, depending on proximity, storage capacity at the edge node, and delay-tolerance specifications.